

MONTHLY WEATHER REVIEW.

WASHINGTON, D. C., DECEMBER, 1882.

INTRODUCTION.

This REVIEW presents a general summary of the meteorological conditions which prevailed over the United States and adjoining territories during the month of December, 1882, and a brief description of the storms occurring in the north Atlantic ocean, as determined from reports of observations taken at 7.00, Washington mean time, and received at this office up to January 20th.

The most marked features of the month have been :

1st.—The low temperature which occurred in the Southern states, especially at stations on the Gulf coast and in Florida, the average being 3° below the mean of December. The low temperature was, in a great measure, due to the cold wave of the 15th, 16th, and 17th, during the continuance of which killing frosts occurred as far south as central Florida. Information of its advance was telegraphed from this office to the sugar and fruit regions of the south, and the Signal Service observers report that the timely warnings thus given were worth thousands of dollars to the sugar interests.

2d.—The high mean temperature which prevailed in the Rocky mountain region. Generally, the month was colder than the mean of December, east of the Rocky mountains, and warmer than the mean in that region, and thence westward to the Pacific coast. The only exception to this occurred in the lower Missouri valley, where the temperature averaged 0°·5 above the mean for the month.

3d.—The rainfall of the month was generally below the December average, except in the lake region, the south Atlantic states, the Florida peninsula, and in the north Pacific region. In the last-mentioned district, the excess was unusually large; at Portland, Oregon, the rainfall reached the unprecedented amount of 20.14 inches, and destructive floods occurred in that vicinity. In the middle Pacific coast region, the deficiency was equally marked.

That part of the REVIEW referring to International Meteorology presents the general weather conditions which prevailed over the northern hemisphere during the month of October, 1880. The prominent meteorological feature of the month was the unusually low temperature that prevailed in Europe,—the month having been one of the coldest Octobers on record, (see NOTES and EXTRACTS.) The October rainfall, in Europe, was also very much in excess of the average; in central and western Europe the monthly rainfall being more than double the October average. In the United States, the weather conditions differed but slightly from the normal. Chart v. exhibits the paths of barometric minima during January, 1881. The depression charted as low-area xxi. is especially noteworthy on account of the phenomenally heavy snowfalls that accompanied it in Europe.

In the preparation of this REVIEW, the following data received up to January 20th, have been used; viz.: the regular tri-daily

weather charts, containing the data of simultaneous observations taken at one hundred and thirty-six Signal Service stations and fourteen Canadian stations, as telegraphed to this office; one hundred and eighty-eight monthly journals, and one hundred and eighty monthly means from the former, and fourteen monthly means from the latter; two hundred and sixteen monthly registers from voluntary observers; fifty-two monthly registers from United States Army Post Surgeons; Marine Records; International Simultaneous Observations; Marine Reports, through the co-operation of the "New York Herald Weather Service;" abstracts of Ships' Logs, furnished by the publishers of "The New York Maritime Register;" monthly reports from the local weather services of Indiana, Kansas, Nebraska, and Missouri, and of the Central Pacific railway company; extracts from the Iowa Weather Bulletin for December, 1882; trustworthy newspaper extracts; and special reports.

BAROMETRIC PRESSURE.

[Expressed in inches and hundredths.]

The mean barometric pressure for the month of December, 1882, over the United States and Canada, is shown by the isobarometric lines (in black) on chart ii.

The region of greatest mean pressure occupies an area extending from Oregon and Nevada eastward and northeastward to the Missouri valley and the extreme northwest, and is inclosed by the isobar of 30.25. The highest monthly mean pressures reported are, Salt Lake City, Utah, and Fort Buford, Dakota, 30.27; and Pike's Peak, Colorado, 30.28. The isobar of 30.15 incloses nearly the whole of the United States west of the ninety-fifth meridian, and also a large area extending eastward of that meridian to the Atlantic, and from the Gulf of Mexico northward to the fortieth parallel. From the region of highest mean pressure, the monthly means decrease to 30.1 at Portland, in the north Pacific coast region; and to 30.04 and 30.06 at Yuma and San Diego, respectively, in the south Pacific coast region. An area of low mean pressure covers the Canadian Maritime Provinces and New England. The lowest monthly means reported are, Sydney, Nova Scotia, 29.86; Charlottetown, Prince Edward Island, 29.90, and Halifax, Nova Scotia, 29.94.

Compared with the means of the previous month, the pressure is from 0.01 to 0.04 higher in the south Atlantic states and in Florida; in the extreme northwest and in the upper Missouri valley, there is an increase of from 0.01 to 0.06; on the Pacific coast from Visalia, California, to Roseburg, Oregon, there is an increase varying from 0.01 to 0.09. In all other districts, the pressure is lower. In New England, the decrease varies from 0.05 to 0.12; in the lake region, from 0.02 to 0.12; in the middle slope, from 0.05 to 0.16; elsewhere the decrease is less marked.

DEPARTURES FROM THE NORMAL VALUES FOR THE MONTH.

Compared with the means of previous years, no marked departures have occurred. In the middle and south Atlantic states, Tennessee and the Ohio valley, there has been a slight increase varying from normal to 0.03 above. From New England westward to the Mississippi river, the pressure is from normal to 0.06 below. From the Mississippi westward to the Pacific coast, the departures are from normal to 0.08 above, except at stations in southern California, and on the west Gulf coast, where the pressure is slightly below the normal.

From observations
taken at 7 a. m. Washington time.
The figures refer to December dates.
A similar chart will be issued monthly, for the
information of all marine interests.

